BY ORDER OF THE COMMANDER
507TH AIR REFUELING WING

507TH AIR REFUELING WING
INSTRUCTION 32-701

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Safety

MANAGEMENT OF HAZARDOUS MATERIAL

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This instruction implements Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*. The purpose of this instruction is to establish procedures for management and disposal of hazardous material (HM) in the 507th Air Refueling Wing (ARW). It references Department of Defense (DOD) Hazardous Material Management System (HMMS), the Occupational Safety and Health Administration (OSHA) Hazardous Communication Standard (HCS), the Environmental Protection Agency (EPA) laws and regulations and the Air Force Material Command (AFMC) Pharmacy Concept and integrates existing policies and procedures to minimize and control the use of HM in the work place. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force Form (AF Form) 847, *Recommendation for Change of Publication*; route AF Form's 847 from the field through the appropriate functional's chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at **www.e-publishing.af.mil**.

1. General Information: This instruction establishes procedures and assigns responsibilities for the management and disposal of hazardous material (HM) in the 507ARW. The Unit Environmental Coordinator (UEC) will be the program manager and the primary contact for chemical assistance within the 507 ARW. Ground Safety (OC-ALC/SEG), Bioenvironmental Engineering (72AMDS/SGPB) and Civil Engineering (72ABW/CEV) provide assistance by periodically surveying the areas, evaluating procedures being used and by making recommendations. Chemical flushing procedures will be coordinated with Environmental Management Operations Engineering (72ABW/CEVOE). CEVOE provides assistance on

chemicals, chemical procedures, chemical handling and chemical waste disposal requirements. Each flight within the 507 ARW will insure compliance with this instruction within the scope of their respective organization. This operating instruction implements for the 507 ARW the OC-ALC-TAFB Instruction 32-7001, Hazardous Material Management Program and the Air Force Material Command (AFMC) Pharmacy Concept.

2. Regulatory Guidance: This instruction will be used in conjunction with OC-ALC/TAFBR 32-7001, Hazardous Material Management Program. It does not replace existing HM instruction, but will address additional requirements imposed by recent environmental regulations/ instructions. The following publications may be used for additional guidance:

2.1. DoD 4140.1-R, Supply Chain Materiel Regulation

2.2. DOD Instruction 6050.5, Hazardous Material Information System

2.3. AFMAN 23-110, USAF Supply Manual

2.4. AFR 67-12, Storage and Handling of Compressed Gases and Liquids in Cylinders and of Cylinders

2.5. AFOSH Standard 91- 31, Personal Protective Equipment

2.6. AFOSH Standard 127-43 Storage, Use and Handling of Flammable and Combustible Liquids

2.7. AFOSH Standard 161-1, Hazardous Material Management

2.8. AFOSH Standard 161-21, Hazardous Communication

2.9. 29 CFR 1910.132, OSHA Protective Equipment

2.10. 29 CFR 1910.1200, OSHA Hazardous Communication Program

2.11. 49 CFR Parts 171-179, Department of Transportation Regulations

2.12. 40 CFR Parts 261-265, Environmental Protection Agency Hazardous Waste Regulations

2.13. 40 CFR Parts 301-304, 311-313 and 355 SARA Title III and Community Right to Know

2.14. 40 CFR 302, CERCLA

2.15. FED-STD-313C, Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities

2.16. AFI 32-7086 Hazardous Materials Management

3. Terms Explained:

3.1. Chemical Staging Area – A designated area to receive, store and distribute hazardous chemicals that have been ordered by authorized user zones. This material is issued in the unit of issue received. The zone will retain and properly secure materials in a flammable storage cabinet until consumed and/or properly disposed of as hazardous waste. Materials **are not** broken down and dispensed as in a dispensing facility.

3.2. Combustible Liquid – A liquid that has a flash point at or above 100 F (37.8C) and below 200 F (93.3C).

3.3. Corrosive – A solid or liquid which causes visible destruction or irreversible alteration to human skin tissue at the site of contact, or has a corrosion rate which exceeds 0.250 inches, per year on steel (SAE 1020) at a temperature of 130F (54.4C).

3.4. Dispensing – Hazardous materials received in bulk containers that are broken down into the unit of use the user requires and crosses more than one zone.

3.5. Empty Containers – Empty containers are those which contain no more than one inch of residual materials or less than 3% by weight. Containers must be stenciled with the word "EMPTY" or have a vinyl "EMPTY" label placed on the container. Empty containers that have previously held acutely hazardous materials must no longer exhibit the materials' hazardous characteristics. Specific guidelines are found in TAFB 32-7004

3.6. Hazardous Material Management System (HMMS) – A designated computer system designed to track the request of hazardous chemicals through the base until final disposal.

3.7. Environmental Safety Occupational Health (ESOH) – A forum that addresses base environmental issues.

3.8. Flammable Solid – Any solid material, other than one classed as an explosive, which under conditions normally incident to transportation is liable to cause fires through friction, retained heat from manufacturing or processing or which can be readily ignited and burned so vigorously and persistently as to create a serious transportation problem.

3.9. Flash Point – The minimum temperature at which a substance gives off flammable vapors which will ignite when in contact with sparks or flame.

3.10. Handling – The movement or transportation of chemicals, hazardous materials or hazardous waste.

3.11. Hazardous Material – A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety or property when used or transported in commerce. These materials may have one or more of the following characteristics:

3.11.1. A flash point or subject to spontaneous heating or subject to polymerization with release of large amounts of energy when handled, stored and shipped without adequate control.

3.11.2. A threshold limit value of below 500 parts per million (PPM) for gases and vapors, below 500 milligrams per cubic meter (mg/m3) of air for fumes and below 25 million particles per cubic foot (MPPCF) of air for dusts.

3.11.3. A single oral dose which will cause 50% fatalities to test animals when administered in doses of 500 milligrams per kilogram of test animal weight.

3.11.4. A strong oxidizing or reducing agent.

3.11.5. Causes first degree burns to the skin in short time exposure or is systemically toxic by skin contact.

3.11.6. In the course of normal operations, may produce dusts, gases, fumes, vapors, mists or smoke with one or more of the above characteristics.

3.11.7. Produces sensitizing effects.

3.12. Hazardous Material Management Program – This program identifies hazardous material through Issue Exemption Code (IEX) coding and controls the issue through authorization of hazardous materials while supporting waste minimization throughout the life cycle.

3.13. Hazardous Waste – The by-product of hazardous materials such as chemicals, sludge and residues generated in an industrial process and equipment and containers contaminated by these by-products.

3.14. Hazardous Waste Generation Point/Initial Accumulation Point – Any location where a generator may accumulate or store up to 55 gallons of a particular waste. The waste must be controlled by the operator of the process generating the waste. There is no time limit for generation or storage of waste at these locations.

3.15. Ignitable – A material having a flash point of 140F (60C).

3.16. Mandated Standards – Standards which are prescribed by laws or regulations and must be adhered to or a notice of violation or other enforcement action could be issued by a regulatory agency such as EPA, Department of Health and OSHA.

3.17. Material Safety Data Sheets (MSDS) – A document prepared by the manufacturer of a hazardous material identifying for the user, as required by OSHA and Federal Standard 313C the following categories:

3.17.1. General Information.

3.17.2. Hazardous Ingredients/Identify Information.

3.17.3. Physical/Chemical Characteristics.

3.17.4. Fire and Explosion Data.

3.17.5. Reactivity Data.

3.17.6. Health and Hazard Data.

3.17.7. Precautions for Safe Handling and Use.

3.17.8. Control Measures.

3.17.9. Transportation Data.

3.17.10. Disposal Data.

3.17.11. Label Data.

3.18. Occupational Safety and Health Administration (OSHA) – The regulatory authority for personnel safety and health.

3.19. Oxidizer – A substance such as chlorate, permanganate, inorganic peroxide, or nitrate that readily yields oxygen to stimulate the combustion of organic matter.

3.20. Permanent Hazardous Waste Storage Facility – A specific area, tank, surface impoundment or other container where hazardous waste is accumulated and/or stored for more than 90 days. A permit is required from EPA to operate this facility.

3.21. Personal Protective Equipment (PPE) – Equipment specifically designed to protect employees from a specific chemical or physical exposure. Clothing, gloves, boots, face

shields and respirators are examples of the personal items that may be required to safely handle and/or use hazardous materials.

3.22. Poison A – Poisonous gases or liquids of such nature that a very small amount of the gas or vapor of the liquid mixed with air is dangerous to life.

3.23. Poison B – Those substances liquid or solid (irritating pastes and semisolids) other than Class A poisons or irritation materials, which are known to be toxic to man as to afford a hazard to health during transportation or which are presumed to be toxic to man when ingested into a person orally, by inhalation or through skin absorption.

3.24. Polymerization – The joining of two or more molecules of a compound to form a more complex compound with a higher molecular weight.

3.25. Radioactive Materials – Any material or combination of materials which spontaneously emit ionizing radiation.

4. Responsibilities:

4.1. 507 ARW UEC will:

4.1.1. Report to all 507 ARW commanders on matters concerning chemicals and hazardous materials and serve as a staff advisor in meetings.

4.1.2. Maintain overall surveillance program for compliance with applicable program directives.

4.1.3. Provide a central contact for chemical and hazardous material problems and information coming into and being disseminated within 507 ARW.

4.1.4. Provide assistance to 507 ARW organizations to solve chemical and hazardous material problems.

4.1.5. Work with supervisors and the unit training office to insure that all personnel within 507 ARW who handle, use, transport or dispose of chemicals receive required training described in Section 11.

4.1.6. Work with the shop supervisor in establishing training for the safe handling of chemicals.

4.1.7. Work with supervisors in locating storage areas for chemicals and obtaining approval from the Fire Department and Ground Safety.

4.1.8. UEC will initiate AF Form 3952, Chemical/Hazardous Material Request for all required chemicals

4.2. 507 ARW Supervisors will:

4.2.1. Insure personnel who handle, use or dispose of chemicals receive proper training and follow the instructions given in section 7, 8 and 9 of this operating instruction as well as other pertinent regulations.

4.2.2. Work with the UEC on processes and procedures using chemicals and hazardous materials.

4.2.3. Provide engineering authorization for hazardous materials as provided in Section 5.1.

4.2.4. Assist the UEC in making necessary facility changes required to meet regulations.

4.2.5. Order equipment as necessary.

4.2.6. Issue work orders for changes to current equipment.

4.2.7. Work with the UEC on establishing priorities.

4.2.8. Designate personnel to manage the requisition, receiving, recording, bar-coding, identification and delivery of all chemicals required in the 507 ARW shops.

4.2.9. Designate personnel to insure that the received materials are proper materials, correct quantity and marked properly with HMMS labels, stock numbers and hazardous warning signs.

4.2.10. Insure that materials are palletized properly and no leakage has occurred.

4.2.11. Insure proper segregation by pallet. Incompatible chemicals on the same pallet will not be accepted.

4.2.12. Check the expiration date for materials which have shelf life. Out of date materials will not be accepted.

4.2.13. Insure the information on Issue Release/ Receipt Document (DD-1348-1A) and the materials received agree.

4.2.14. Insure material not passing the inspection will be unloaded from the delivery truck at the discretion of the receiving organization or will be sent back to the warehouse or vender for proper shipping requirements.

4.2.15. Receive the ordered materials from supply or vendor truck and unload them.

4.2.16. Deliver the chemicals to the correct production shops.

4.2.17. Follow the additional procedures in Section 6.

4.2.18. Insure that all personnel who receive, transport, store, handle, use or dispose of chemicals and hazardous materials including the immediate supervisor, will attend the training course, "Handling and Storage of Hazardous Chemicals." Attendees for this course will be scheduled through the 507 ARW training office.

4.2.19. Insure that all personnel use protective clothing and/or equipment when mixing, storing and handling chemicals. Specific types of protective clothing and equipment are listed in AFOSH 91-31.

4.2.20. Insure maintenance shops which have a requirement for continuous use of the same chemical will keep a required minimum supply in approved flammable storage cabinets in the shops. These cabinets will be closed and unlocked at all times.

4.2.21. Insure that, IN CASE OF A CHEMICAL SPILL the actions specified in Section 10 be followed.

4.2.22. Work with the UEC on all matters concerning chemicals and hazardous materials.

4.2.23. Manage the chemical authorization process in Section 5.1.

4.2.24. Provide UEC MSDS for new process, in-use chemicals and hazardous materials.

4.2.25. Provide chemical assistance to other 507 organizations when requested by the UEC.

4.2.26. Maintain and update the following regulation.

4.2.26.1. AFOSH Standard 48-21 Hazard Communication Program.

4.2.26.2. Procedures for non-routine tasks involving hazardous materials.

4.2.26.3. Work area chemicals and materials inventory.

4.2.26.4. Material Safety Data Sheets (MSDS)

4.2.27. Inform all employees about the hazard communications program.

4.2.28. Request AF Form 3952 Chemical/Hazardous Material Request for initial and renewal of authorized hazardous chemicals. The procedure for submitting Form 3952 is in Section 5.1.

4.2.29. Insure each production shop using chemicals and hazardous materials will have a trained chemical monitor and an alternate to order, receive and handle all chemicals used in that shop.

4.2.30. Insure that all hazardous materials are stored in accordance with Section 7.

4.2.31. Insure that the handling and disposal requirements of Sections 8 and 9 are followed by all employees.

4.3. Chemical Monitors will:

4.3.1. Work with the UEC on all matters relating to chemicals and hazardous materials.

4.3.2. Request that the UEC order the chemicals needed.

4.3.3. Request only the minimum amount of material required for the present use.

4.3.4. Maintain a standard chemical record book which will contain the following information:

4.3.4.1. Names of the persons authorized and responsible for ordering, receiving and record keeping.

4.3.4.2. Names of Chemicals, National Stock Numbers (NSN), Usage location and monthly usage.

4.3.4.3. Storage location, required quantity and authorization.

4.3.5. Maintain a log book in which the following information will be entered for all chemicals ordered and received:

4.3.5.1. Name of Chemical and National Stock Number (NSN).

4.3.5.2. Date and Time Ordered and Received.

4.3.5.3. Quantity Ordered and Quantity Received.

4.3.5.4. Quantity Disposed.

4.3.6. Inspect the incoming material for leakage, proper labeling and date of manufacture for shelf life items. If the expiration date is over, do not accept the material, send it back to supply.

4.3.7. Insure that all hazardous materials are stored in accordance with Section 7.

5. Authorization and Order Requirements for Hazardous Materials:

5.1. Authorization Requirements

5.1.1. Shops using hazardous materials must be licensed through the use of AF Form 3952 before receipt or use of these materials. Hazardous material ordered, stored or used without current authorization will result in an Environmental Deficiency Report (EDR) for the 507 ARW.

5.1.2. The 507 UEC will manage the authorization process. Copies of all current AF Form 3952's will be kept in the shops.

5.1.3. OC-ALC Form H-214 is required to load a new NSN/ item into a supply system. An MSDS must be attached with this form.

5.1.4. An item must be assigned an IEX code before a shop can request authorization for the material.

5.1.5. The completed AF Form 3952 will be submitted to 72ABW/CEVO with the following:

5.1.5.1. A current MSDS.

5.1.5.2. The justification for the material, such as a copy of the Technical Order page or other reference.

5.1.5.3. A list of available protective equipment.

5.1.6. Authorizations have varying expiration periods that range from six months to over one year. It is the responsibility of the supervisor and the chemical monitor to insure that all authorizations are current.

5.1.7. Reauthorization of a chemical can be processed through the Hazardous Material Management System (HMMS) using the automated AF Form 3952 procedure.

5.1.8. All materials currently controlled and the authorized users can be viewed using HMMS. Information on material orders as well as information on the composition and characteristics of a substance can also be obtained from HMMS.

5.1.9. Possession of controlled hazardous materials is a violation of base regulation and may be a violation of environmental law or an OSHA HAZCOM Standard. This could result in fines and citations being levied against Tinker AFB.

5.2. Order Requirements.

5.2.1. The UEC will order all chemicals required by the 507 ARW through base supply (72 ABW/LGS) or generate the GPC (Government Purchase Card) card purchase request.

5.2.2. Orders will be placed using AF Form 2005, **Issue/Turn-In Request**. The completed form will be sent to 72ABW/CEVO using HMMS, mail, fax, or phone.

5.2.3. The order will specify minimum quantities and the frequency of delivery so that new materials which come in barrels will be used within 48 hours by production shops.

5.3. IMPAC credit cards can be used to procure hazardous materials.

5.4. A waiver from SAF/AQ must be approved before Class I ODS can be authorized or ordered.

6. Transportation Requirements for Hazardous Materials:

6.1. Hazardous materials must be properly identified with appropriate warning labels before transport.

6.2. Only compatible hazardous materials will be transported together on a pallet, forklift or truck.

6.3. No more than three (3) barrels are allowed for a standard pallet and no more than four (4) barrels for a tier pallet.

6.4. Personnel responsible for transporting hazardous material will be trained for an initial spill response.

6.5. Chemicals will not be located with an incompatible group of chemicals in the storage area, even when moving material to gain access to certain chemicals as required.

6.6. Flammable liquids in containers exceeding 30 gallons will not be stacked.

7. Storage Requirements for Hazardous Materials:

7.1. In-use chemicals which are used to maintain process tank concentrations between complete change out of the process tank may be stored in the immediate shop area as long as the quantity of all in-use materials are kept to a minimum. Flammable materials exceeding a one day supply must be stored in flammable storage lockers, properly segregated, in an area approved by CEVO, the Fire Department and Bioenvironmental Engineering.

7.2. All materials will be labeled with an HMMS Label.

7.3. Personnel engaged in receiving and storing chemicals will possess sufficient knowledge to manage these materials in a manner consistent with established procedures found in DOD 4145.19-R, OC-ALC-TAFBI 32-7004, and OC-ALC-TAFBI 32-7001.

7.4. Containers found to be leaking will be treated as a chemical spill. Follow the procedures in Section 10 and OC-ALC Plan 19-2.

7.5. Outside chemical storage areas, where hazardous material is stored prior to use, require secondary containment to prevent a spill from entering the storm drainage system, polluting surface waters, and/or contaminating soil.

7.6. Sandbags are not considered a means of secondary containment.

7.6.1. Hazardous material storage buildings may be used for containment.

7.6.2. Insure that chemicals and hazardous material in a fiber board barrel, carton, etc. are stored in a covered shelter to avoid exposure to weather and rain.

7.6.3. Hazardous materials and hazardous waste will not be stored together.

8. Handling Requirements for Hazardous Materials:

8.1. All personnel responsible for using hazardous materials will be trained to recognize and have knowledge of the hazardous characteristics of the chemicals that they are using. Training will include as a minimum, review of MSDS's and access to MSDS's for materials to be handled.

8.2. All personnel will wear the appropriate PPE as required.

8.3. All materials will be labeled with an HMMS Label.

8.4. Do not handle any unidentified containers. Notify the supervisor and contact CEVPC so that the material can be analyzed.

9. Disposal Requirements for Hazardous Materials:

9.1. Hazardous materials must be considered for recovery, recycling, reclamation, and treatment before disposal. Unused and unopened materials can be turned in to DRMO using the following procedure.

9.1.1. Fill out a "Request for Hazardous Material Disposal Turn-In Document" memorandum along with the MSDS for the material and send to CEVPC, Attn: James Dawson or Sharon Ragsdale. CEVPC will prepare a DD Form 1348-1, Turn-In Document and notify the requester when ready for pick-up.

9.1.2. Pick-up the DD Form 1348-1 and required warning labels from Bldg. 808 (EMOE) Call DRMO, ext. 92204 to get approval to transport HM to DRMO Building 811. Transport HM to DRMO with MSDS and DD Form 1348-1 to DRMO Building 811.

9.2. Disposal requirements for hazardous waste are specifically addressed in OC-ALC TAFBI 32-7004, Hazardous Waste Management Instruction.

9.3. CEVPC is the point of contact for hazardous waste disposal.

10. Spill Requirements:

10.1. A reportable quantity means, for any CERCLA hazardous substance, the reportable quantity established in table 302.4 of 40 CFR 302,will have guidance for such substance, for any other substance, the reportable quantity is one pound.

10.1.1. In the event of a chemical spill, personnel will take the following action:

10.1.1.1. Immediately notify 72CES/CEG, Fire Department, Ext. 911 and give type, location, size of the spill and name of the individual reporting.

10.1.1.2. Immediately inform the supervisor of the incident area.

10.2. The supervisor of the incident area will:

10.2.1. Notify the 507 ARW Command Post Ext 47641 and the OC-ALC Environmental Management Office Engineering (CEVOE/X42010) and (507 ARW/UEC/X43105) or designated alternate. After hours numbers call 405-618-0052.

10.2.2. Secure the incident area.

10.2.3. Implement safety regulations and containment procedures of OC-ALC Plan 19-2. **NOTE:** Do not send personnel into the spill area for containment or any other purpose

until the type of Hazard has been identified and appropriate protective equipment has been determined and provided.

10.2.4. Contact the Squadron Superintendent or Senior ART of the affected work center.

11. Training Requirements:

11.1. All personnel who receive, transport, store, handle, use or dispose of chemicals and hazardous materials, including the immediate supervisor, will attend the training course, "Handling and Storage of Hazardous Chemicals." Attendees for this course will be scheduled through the Wing Training Office.

11.2. Other required training shall be scheduled as necessary.

JEFFERY R. GLASS, Colonel, USAFR
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 32-7086, *Hazardous Materials Management,* 01 Nov 2004

AFMAN 23-110, *USAF Supply Manual,* 01 Apr 2009

DoD 4140.1-R, *Supply Chain Materiel Regulation*, 23 May 2003

DOD Instruction 6050.5, *Hazardous Material Information System,* 15 Aug 2006

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

ABW—Air Base Wing

AF—Air Force

AFB—Air Force Base

AFMAN—Air Force Manuel

AFMC—Air Force Material Command

AFOSH—Air Force Occupational Safety Health

AFPD—Air Force Policy Directive

ALC—Air Logistics Command

AMDS—Aerospace Medical and Dental Squadron

AQ—Acquisition

ARW—Air Refueling Wing

ARWI—Air Refueling Wing Instruction

CEG—Civil Engineering and Geosciences

CERCLA—Comprehensive Environmental Response Compensation and Liability Act

CES—Civil Engineering Squadron

CEV—Environmental Management

CEVOE—Environmental Management Operations Engineering

CEVPC—Environmental Management Program Compliance

CFR—Code of Federal Regulations

CV—Vice Commander

DoD—Department of Defense

DRMO—Defense Reutilization and Marketing Office

EDR—Environmental Deficiency Report

EPA—Environmental Protection Agency

ESOH—Environmental Safety and Occupational Health

EXT—Extension

GPC—Government Purchase Card

HAZCOM—Hazardous Communication

HCS—Hazardous Communication Standard

HM—Hazardous Material

HMMS—Hazardous Material Management System

IEX—Issue Exception Code

LGS—Logistics Squadron

MG—Maintenance Group

MOF—Maintenance Operation Flight

MPPCF—Million Particles Per Cubic Foot

MSDS—Material Safety Data Sheet

NSN—National Stock Number

OC—Oklahoma City

ODS—Ozone Depleting Substance

OPR—Office of Primary Responsibility

OSHA—Occupational Safety and Health Administration

PPE—Personal Protective Equipment

PPM—Parts Per Million

RDS—Record Disposition Schedule

SAF—Secretary of the Air Force

SEG—Ground Safety

SGPB—Bio Environmental

TAFB—Tinker Air Force Base

UEC—Unit Environmental Coordinator